

# The Labour Market Adjustment Of Foreign-Born Workers In Canada: A Multinomial Logit Model Of Employment Status

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## ABSTRACT

*This paper examines how the employment profile of newcomers to Canada differs from that of the native-born, controlling for human capital and other individual characteristics, and whether that profile converges to that of the native-born as the length of residence in Canada increases. These questions are important for understanding whether (and the extent to which) foreign workers adjust to Canadian labour markets. They also have significant policy relevance, given that demographic trends in the country suggest that immigration will likely be an even more significant contributor to labour force growth in the years ahead. The econometric tool we employ is the multinomial logit model, which is estimated using data from the 2001 Census of Canada. Employment status, which is a categorical variable with several dimensions, is explained in terms of human capital, demographic and other individual characteristics, with additional controls for immigration status and variables intended to capture the impact of the length of residence of foreign workers in Canada. Since foreign workers are themselves a disparate group, entering Canada with very different socio-economic characteristics, with the potential for very different paths of subsequent adjustment to host country labour markets, we consider several foreign-born groups. This is important for capturing differences that reflect the shift in immigration away from traditional sources (e.g. the U.K) to non-traditional sources (e.g. Asia), and the implications for labour market activity and outcomes.*

## INTRODUCTION

There is now an extensive body of work on whether (and the degree to which) newcomers assimilate in host country labour markets. Typically, assimilation is examined in terms of whether immigrant labour outcomes such as wages earned and labour force participation rates converge to those of the native-born over time [see, for instance, Baker and Dwayne (1994), Abbott and Beach (1993), Prescott and Wandschneider (1995), Worswick (1996)]. In Canada, this issue is a critical one from the public policy perspective, especially since demographic trends in the country suggest that immigration will likely be an even more significant contributor to labour force growth in the years ahead, and that the bulk of new immigration flows are likely to come from non-traditional sources. But the labour market outcomes of the foreign-born have implications that go beyond policy to encompass issues relating to their well being and broader integration into Canadian society.

An important indicator of the degree to which newcomers are successful in adjusting to Canadian labour markets is employment (labour force) status. On entry into Canada, foreign-born workers, especially those from non-traditional source countries, are unfamiliar with Canadian labour markets and institutions, may lack language fluency and have limited access to occupational networks, except perhaps in ethnic labour markets in major urban centres. They may also bring with them credentials that are often not recognized. As such, these factors can lead to prolonged periods of search unemployment or underemployment, or withdrawal from the labour force. These problems seem to be especially severe in the regulated trades and professions [Boyd 2000]. If these factors are important, one might observe a disproportionate concentration of foreign-born workers in part-time employment, among the unemployed or not in the labour force.

This raises some important questions. First, how does the labour force status of newcomers differ from that of the native-born, controlling for human capital and other individual characteristics? Second, does the employment profile of newcomers converge to native-born norms as the length of residence in Canada increases? One might expect, for the reasons alluded to above, that newcomers would initially be disadvantaged in the labour market, but would adjust to native-born norms over time. The extent to which newcomers are initially disadvantaged and the extent of their subsequent adjustment form the focus of this study. Specifically, our objective is to examine both these questions empirically for Canada. The econometric tool we employ is the multinomial logit model, which is especially suited to modelling labour force status. That status is explained in terms of human capital, demographic and other individual characteristics, with additional controls for immigration status and variables intended to capture the impact of the length of residence of foreign workers in Canada. Few studies have used this approach to labour market assimilation of the foreign-born in Canada, an exception being the study Boyd (2000), who examines the employment status and occupational profile of Asian engineers in Canada, the primary objective being to detect whether there is a mismatch between worker skills and jobs.

The data we use are taken from the 2001 Canadian census. Multinomial logit models are estimated for native-born workers and foreign-born workers. Foreign-born workers are themselves a disparate group, so that they enter Canada with very different socio-economic characteristics, with the potential for very different paths of subsequent adjustment to host country labour markets. For instance, there is the potential impact of ethnicity. In this context, it is especially important to capture differences that reflect the shift in immigration away from traditional sources (e.g. UK, Western Europe) to non-traditional sources (e.g. Asia), and the implications for labour market activity and outcomes. For example, for newcomers from non-traditional sources, issues such as language ability can have an important bearing on labour market outcomes. In light of this, we examine two groups of traditional immigrants (the British and Italians) and two important non-traditional groups (the Chinese and South-Asians). The logit models are estimated for Canadians in general, the native-born, the foreign born, and the four groups of foreign born indicated above.

The paper is organized as follows. In section II, we describe the data, the model adopted and the estimation strategy. Section III presents and analyzes the results. In section IV, we discuss the convergence issue, while Section V concludes.

## **THE DATA, MODEL AND ESTIMATION STRATEGY**

In this section, we first discuss the data used and provide, amongst other things, a snapshot of the employment status of foreign-born and native-born individuals at the time of the 2001 census. Following that we present the underlying model and discuss the estimation strategy.

### **The Data and Statistical Overview**

In this study, we restrict our samples to individuals aged 25-64 years because we wish to focus our attention on individuals who have completed a significant portion of their formal schooling and who are not of retirement age. It is this group that makes up the bulk of the labour market. Given the large numbers of observations in the 2001 census file for the native-born (and Canadians in general), we took a 25 percent random sample for each of these groups. However, the entire sample of the foreign-born in the above-mentioned age group was taken into consideration.

In looking at employment status, we distinguish between four categories that describe that status: those working full-time (1), those working part-time (2), the unemployed (3), and those who are out of the labour force (4). The employed were classified as full-time if they worked full-time weeks (30 hours or more) during the reference week and part-time otherwise. This definition of employment status provides the basis of the multinomial logit model estimated. In Table 1 we present summary statistics to highlight the actual employment profile, as well other socio-economic characteristics, of all Canadians, as well as by several population groups.

The table shows first that across all population groups examined, an overwhelmingly large fraction (no less than 75 percent) is employed full-time. Nevertheless, there are perceptible differences between the groups being studied in terms of the incidence of part-time employment, unemployment and not being in the labour force. For instance, the incidence of unemployment is clearly greater among the South Asians and Chinese compared to the other foreign-born groups as well as the native-born, while the latter also seem to be out of the labour force with much greater frequency. A number of other features stand out in Table 1. The non-traditional foreign-born are much younger, on average, than the traditional foreign-born, and this is reflected in their immigration profiles. Thus, more than 50 percent of the non-traditional immigrants entered Canada after 1990, while only 2 percent of Italian immigrants and 7 percent of British immigrants came in that period. Also clear from the data is the fact that the Chinese and South Asians as well as the Italians are overwhelmingly concentrated in large urban centres or census metropolitan areas (CMAs), compared to the British and especially the native-born. It is also worth noting that more than 12 percent of Chinese immigrants do not know at least one official language; this fraction under 4 percent for the South Asians and Italians.

**TABLE 1**  
**A Statistical Profile Of The Socio-Economic Status Of Native-Born & Foreign Born Canadians: 2001 Census**

| Characteristics                              | All<br>Canadians | Native-<br>born | Foreign-Born Groups |         |         |         |                |
|----------------------------------------------|------------------|-----------------|---------------------|---------|---------|---------|----------------|
|                                              |                  |                 | All                 | British | Italian | Chinese | South<br>Asian |
| Age (years)                                  | 41.7             | 41.3            | 43.7                | 46.8    | 50.3    | 42.4    | 40.9           |
| CMA residents                                | 65.0             | 58.3            | 89.6                | 77.4    | 92.9    | 97.5    | 93.2           |
| <b>Highest Degree</b>                        |                  |                 |                     |         |         |         |                |
| Doctorate                                    | 0.7              | 0.4             | 1.5                 | 1.7     | 0.3     | 2.6     | 1.4            |
| Medicine                                     | 0.4              | 0.3             | 0.6                 | 0.4     | 0.0     | 0.6     | 0.7            |
| Masters                                      | 3.8              | 3.1             | 5.7                 | 4.4     | 1.9     | 8.3     | 8.3            |
| Bachelors                                    | 14.1             | 13.4            | 15.9                | 12.2    | 5.7     | 22.2    | 20.5           |
| Certificate/Diploma                          | 38.2             | 39.1            | 35.4                | 45.5    | 27.7    | 24.8    | 24.2           |
| High School                                  | 22.5             | 23.4            | 19.7                | 21.5    | 21.7    | 18.1    | 21.4           |
| None                                         | 20.3             | 20.2            | 21.2                | 14.3    | 42.6    | 23.4    | 23.5           |
| Schooling (years)                            | 13.6             | 13.5            | 13.7                | 14.4    | 11.1    | 13.9    | 13.7           |
| <b>Employment Status</b>                     |                  |                 |                     |         |         |         |                |
| Employed full time                           | 75.7             | 75.8            | 76.1                | 77.1    | 78.9    | 74.9    | 76.4           |
| Employed part time                           | 13.4             | 13.6            | 12.7                | 13.6    | 10.6    | 12.1    | 10.5           |
| Unemployed                                   | 4.5              | 4.6             | 4.1                 | 2.9     | 2.9     | 3.8     | 5.6            |
| Not in labour force                          | 6.3              | 6.0             | 7.1                 | 6.4     | 7.6     | 9.3     | 7.5            |
| <b>Immigrant Cohorts (foreign-born only)</b> |                  |                 |                     |         |         |         |                |
| 1995-1999                                    | *                | *               | 14.9                | 2.9     | 0.9     | 26.7    | 27.0           |
| 1990-1994                                    | *                | *               | 17.1                | 4.1     | 1.1     | 29.8    | 25.8           |
| 1984-1990                                    | *                | *               | 13.7                | 59.0    | 1.8     | 14.9    | 14.9           |
| Pre-1984                                     | *                | *               | 54.2                | 87.0    | 96.1    | 32.2    | 32.3           |
| Knowledge of official language               | 99.3             | *               | 97.1                | *       | 97.9    | 87.4    | 96.4           |
| Sample size                                  | 312680           | 245622          | 64343               | 7241    | 3256    | 6332    | 6333           |

All number is percentages of the total sample for each group, unless stated otherwise.

### The Model And Estimation Strategy

The multinomial logit model we use is of the form:

$$\log (\pi_{ij}/\pi_{im}) = \beta_{j0} + \sum \beta_{jk} X_{ik} \quad (1)$$

where  $(\pi_{ij}/\pi_{im})$  is the probability of individual  $i$  ( $=1,2,3,\dots,n$ ) being in category  $j$  ( $=1,2,3,\dots,J$ ) relative to the probability of being in some reference category  $m$ , the  $\beta$ s are the coefficients, and the  $X_k$  ( $k=1,2,3,\dots,K$ ) are the  $K$  control variables. The signs of the impact coefficients indicate the direction of impact on the probability of being in category  $j$  relative to the probability of being in the reference category  $m$  [see, for instance, Greene (1997) for the multinomial logit model and its interpretation and use].

The probability of observing any category, conditional on any specified vector of characteristics, can then easily be obtained from the following:

$$\pi_{ij} = \exp(\beta_{j0} + \sum \beta_{jk} X_{ik}) / \sum \exp(\beta_{j0} + \sum \beta_{jk} X_{ik}) \quad (2)$$

where, using the Theil normalization (that is, using the first category as the benchmark for comparison), we have  $\beta_{10} = 0$ , and  $\beta_{1k} = 0$  for all  $k$ .

Equation (1) was estimated by the method of maximum likelihood for employment status, which has four categories as indicated in the previous section. The estimation was conducted for the aggregate sample, the native-born, all foreign-born, as well for the four foreign-born groups – British, Italian, Chinese, and South-Asian. Before we discuss our findings, we briefly discuss the choice of explanatory variables. In all logit regressions, we included the schooling and age of an individual (measured in years), as well as binary variables for the sex and location of an individual. The sex variable is 1 for females and zero for males, while the location variable is 1 if the individual lives in a CMA and zero if not. For the foreign-born, language ability can potentially have an important impact on labour market outcomes. The language ability variable is also a binary variable equal to 1 if the individual does not know at least one official language (English, French or both) and zero otherwise. This variable was not introduced in the British and native-born models, but was included in all others. To assess how foreign-born employment status changes as the length of residence in Canada increases, we introduced a number of variables in the foreign-born logits to capture these effects. Specifically, we defined four immigrant cohorts, reflecting the vintage of the foreign-born. These cohorts are as follows. We defined “new” immigrants as those who arrived in Canada during the 1995- 1999 interval. We do not include the years 2000 and 2001 in this cohort because many (if not most) newcomers would have been in the country too short a time for a meaningful analysis of their choices. The older cohorts are then defined as those arriving during the 1990-1994 interval, those arriving during the 1984-1989 interval, and those who arrived prior to 1984. We introduce these as binary variables (the pre-1984 cohort being the default group).

## THE RESULTS

Looking at the employment status logits in Tables 2, 3 and 4, note that the benchmark category is the group of individuals who are employed full-time. In general, the coefficients in Table 2, which depicts the results for all Canadians, the native-born, and all immigrants, have signs that are expected on prior grounds. Moreover, the vast majority of the coefficients are statistically significant at the 5 percent level or less, and the likelihood ratio is also very highly significant with a p-value very close to zero. To give a general flavour of the estimates, we note the following highlights. Additional schooling reduces the likelihood of part-time employment, unemployment or not being in the labour force, relative to the full-time employment, for each population group. The same effect is observed for those residing in a CMA relative to those who do not. Compared to males, females are much likely to be employed part-time, unemployed or out of the labour force (relative to being employed full time). Thus, factors like child-bearing, and the disproportionate burden on women of looking after children and providing home care, which are some of the reasons that likely account for this finding, are common to both native-born and foreign-born Canadians.

Language ability does not appear to have a statistically significant impact on the likelihood of part-time versus full-time employment for Canadians in general and the foreign-born. However, for both these population groups, the likelihood of unemployment and being out of the labour force relative to being fully employed, is clearly greater for those who do not know at least one official language. Finally, compared to the established immigrants, new immigrants - that is, those arriving during 1995-1995 – show the same pattern of disadvantage as females do in terms of the implications for employment status. Note further that the size of this disadvantage appears to diminish for older immigrant cohorts, although perhaps the difference between those came in 1984-1989 are not very different than those

who came before 1984 (the oldest immigrants). Overall, these findings do suggest that new immigrants are more likely to have an employment profile that is worse than that of older immigrants, that females do worse than males and that schooling reduces the likelihood of being employed-part-time or unemployed relative to being full-time for all population groups.

**TABLE 2**  
**Multinomial Logit Estimates Of Employment Status: Native Born & Foreign-Born Canadians**

|                      | ALL CANADIANS                                   |                                         |                                        | NATIVE-BORN                                     |                                         |                                        | FOREIGN-BORN                                    |                                         |                                        |
|----------------------|-------------------------------------------------|-----------------------------------------|----------------------------------------|-------------------------------------------------|-----------------------------------------|----------------------------------------|-------------------------------------------------|-----------------------------------------|----------------------------------------|
|                      | Employed Part Time<br>vs.<br>Employed Full Time | Unemployed<br>vs.<br>Employed Full Time | Not In LF<br>vs.<br>Employed Full Time | Employed Part Time<br>vs.<br>Employed Full Time | Unemployed<br>vs.<br>Employed Full Time | Not In LF<br>vs.<br>Employed Full Time | Employed Part Time<br>vs.<br>Employed Full Time | Unemployed<br>vs.<br>Employed Full Time | Not In LF<br>vs.<br>Employed Full Time |
| Constant             | -2.364<br>(-59.96)                              | -0.3144<br>(-5.420)                     | -2.760<br>(-52.19)                     | -2.261<br>(-49.93)                              | 0.1572<br>(2.3770)                      | -2.696<br>(-43.14)                     | -2.642<br>(-27.32)                              | -2.354<br>(-15.27)                      | -2.918<br>(-23.91)                     |
| Schooling            | -0.0293<br>(15.48)                              | -0.1076<br>(-37.75)                     | -0.0647<br>(-26.02)                    | -0.0386<br>(-17.30)                             | -0.1399<br>(-41.83)                     | -0.0800<br>(-26.34)                    | -0.0098<br>(-2.649)                             | -0.0269<br>(-4.511)                     | -0.0434<br>(-9.695)                    |
| Age                  | 0.0106<br>(18.95)                               | -0.0185<br>(-20.31)                     | 0.0194<br>(25.24)                      | 0.0103<br>(16.10)                               | -0.0198<br>(-19.12)                     | 0.0219<br>(23.37)                      | 0.0146<br>(10.69)                               | -0.0069<br>(-3.091)                     | 0.0178<br>(10.17)                      |
| Sex                  | 1.232<br>(105.2)                                | 0.0382<br>(2.172)                       | 0.7376<br>(45.26)                      | 1.269<br>(96.01)                                | 0.0076<br>(0.380)                       | 0.7543<br>(42.67)                      | 1.111<br>(42.86)                                | 0.2473<br>(6.176)                       | 0.7124<br>(22.43)                      |
| CMA<br>resident      | -0.2087<br>(-0.209)                             | -0.5775<br>(-32.72)                     | -0.1291<br>(-8.240)                    | -0.1782<br>(-14.34)                             | -0.6487<br>(-32.29)                     | -0.1716<br>(-9.756)                    | -0.4008<br>(-10.89)                             | -0.2977<br>9-4.630)                     | -0.2285<br>(-4.589)                    |
| Language<br>ability  | -0.0886<br>(-1.273)                             | 0.3399<br>(3.793)                       | 0.5008<br>(7.28)                       | *                                               | *                                       | *                                      | -0.0455<br>(-0.599)                             | 0.3954<br>(3.923)                       | 0.3022<br>(3.895)                      |
| Immigrant<br>cohorts |                                                 |                                         |                                        |                                                 |                                         |                                        |                                                 |                                         |                                        |
| 1995-1999            | *                                               | *                                       | *                                      | *                                               | *                                       | *                                      | 0.2816<br>(7.352)                               | 0.7110<br>(12.416)                      | 0.6023<br>(12.93)                      |
| 1990-1994            | *                                               | *                                       | *                                      | *                                               | *                                       | *                                      | 0.1155<br>(3.188)                               | 0.4134<br>(7.217)                       | 0.3432<br>(7.585)                      |
| 1984-1989            | *                                               | *                                       | *                                      | *                                               | *                                       | *                                      | 0.0032<br>(0.082)                               | 0.2449<br>(3.883)                       | 0.0944<br>(1.858)                      |
| Likelihood<br>ratio  | 19038                                           |                                         |                                        | 16853                                           |                                         |                                        | 3147                                            |                                         |                                        |
| N                    | 312680                                          |                                         |                                        | 245622                                          |                                         |                                        | 64343                                           |                                         |                                        |

Numbers in parentheses are t ratios, and LF stands for labour force.

We turn next to Table 3 and 4, which contain the more detailed results for the four foreign-born groups studied in this paper. More educated individuals are less likely to be employed part-time or unemployed (relative to being employed full time) among the British and South-Asian foreign-born, but this does not appear to be the case for the Chinese or Italians in that the impacts for the latter are not significant at the 5 percent level. Again women belonging to each of the foreign-born groups clearly have a poorer employment status than males with the same bundle of human capital and other characteristics. For the British and Italians, length of residence does not appear to matter in that most of the coefficients of the cohort variables are statistically insignificant at the 5 percent level. The South-Asian group fits most closely the pattern found for the aggregate foreign-born group in so far as the effect of length of residence is concerned. Older immigrants clearly have a better employment profile than the newer ones although, once again, the difference between the two older cohorts is not significant statistically. The results for the Chinese also show this pattern but here the main difference appears to be between the new immigrants and all others, as the differences among the latter do not appear to be statistically significant. One would expect that the language

ability variable would impact on employment status, especially for the non-traditional foreign-born – the Chinese and South-Asians. This is borne out to a degree in that not knowing at least one official language increases the chances of being unemployed or not being in the labour force (relative to being employed full-time) for both the Chinese and South-Asians, but no statistically significant impact on the chances of part-time employment is found for these groups.

**TABLE 3**  
**Multinomial Logit Estimates Of Employment Status: Foreign-Born Of British & Italian Origin**

|                   | TRADITIONAL FOREIGN-BORN GROUPS                       |                                            |                                           |                                                       |                                            |                                           |
|-------------------|-------------------------------------------------------|--------------------------------------------|-------------------------------------------|-------------------------------------------------------|--------------------------------------------|-------------------------------------------|
|                   | BRITISH                                               |                                            |                                           | ITALIAN                                               |                                            |                                           |
|                   | Employed<br>Part Time<br>vs.<br>Employed<br>Full Time | Unemployed<br>vs.<br>Employed<br>Full Time | Not In LF<br>vs.<br>Employed<br>Full Time | Employed<br>Part Time<br>vs.<br>Employed<br>Full Time | Unemployed<br>vs.<br>Employed<br>Full Time | Not In LF<br>vs.<br>Employed<br>Full Time |
| Constant          | -2.648<br>(-8.663)                                    | -1.949<br>(-3.462)                         | -4.204<br>(-9.806)                        | -3.632<br>(-5.896)                                    | -4.034<br>(-3.698)                         | -5.482<br>(-7.364)                        |
| Schooling         | -0.0322<br>(-2.165)                                   | -0.0611<br>(-2.126)                        | -0.0262<br>(-1.302)                       | -0.0035<br>(-0.209)                                   | -0.0278<br>(-0.951)                        | -0.0310<br>(-1.676)                       |
| Age               | 0.0180<br>(4.792)                                     | -0.0037<br>(-0.520)                        | 0.0390<br>(7.197)                         | 0.0284<br>(3.179)                                     | 0.0197<br>(1.257)                          | 0.0628<br>(5.805)                         |
| Sex               | 1.3052<br>(16.82)                                     | 0.0624<br>(0.439)                          | 0.7908<br>(7.858)                         | 1.446<br>(11.46)                                      | 0.3706<br>(1.731)                          | 0.7072<br>(5.128)                         |
| CMA resident      | -0.3126<br>(-3.854)                                   | -0.3990<br>(-2.555)                        | -0.2506<br>(-2.240)                       | -0.5625<br>(-2.804)                                   | -0.1555<br>(-0.386)                        | -0.1442<br>(-0.551)                       |
| Language ability  | *                                                     | *                                          | *                                         | -0.4493<br>(-0.923)                                   | 0.5390<br>(0.987)                          | 0.2048<br>(0.539)                         |
| Immigrant cohorts |                                                       |                                            |                                           |                                                       |                                            |                                           |
| 1995-1999         | 0.1575<br>(0.707)                                     | -0.2137<br>(-0.459)                        | 0.2604<br>(0.838)                         | 0.3663<br>(0.566)                                     | 1.293<br>(1.683)                           | 1.664<br>(3.109)                          |
| 1990-1994         | -0.1246<br>(-0.637)                                   | -0.160<br>(-0.433)                         | -0.4392<br>(-1.327)                       | -0.5518<br>(-0.740)                                   | 0.0769<br>(0.075)                          | 0.4868<br>(0.779)                         |
| 1984-1989         | -0.067<br>(-0.424)                                    | -0.0926<br>(-0.302)                        | -0.2773<br>(-1.104)                       | -0.7608<br>(-1.036)                                   | 0.3318<br>(0.448)                          | 0.6517<br>(1.328)                         |
| Likelihood ratio  | 490                                                   |                                            |                                           | 239                                                   |                                            |                                           |
| N                 | 7241                                                  |                                            |                                           | 3256                                                  |                                            |                                           |

Numbers in parentheses are t ratios, and LF stands for labour force.

Overall, the evidence suggest that the employment profiles of the British and Italian foreign-born are generally stable across cohorts, while those of the South-Asians and Chinese clearly point to an improvement in that profile as the length of residence in Canada increases. The profile is relatively the poorest for those immigrants who are female, with low human capital (education and language ability), and those who are new to Canada. In this regard, a new female immigrant from Britain or Italy with the same level of human capital as a new female South-Asian or Chinese immigrant would have a better employment profile.

#### THE EMPLOYMENT PROFILE OF FOREIGN AND NATIVE BORN: THE ISSUE OF CONVERGENCE

Our analysis of the employment profiles of the foreign-born suggests that those profiles improve with the length of residence in Canada, especially for those coming from non-traditional source countries. However, this does not tell us to what extent the employment profiles for these groups converge to (or diverge from) those of the native-born. This can be looked at by comparing the absolute probability of “equivalent” native-born and foreign-born being in any specific employment state. By way of illustration, we compare an “average” native-born male with a foreign-born (belonging to different immigrant cohorts) with the same bundle of characteristics – a CMA resident with no

language disability, 45 years of age and with 13.5 years of schooling. The probabilities associated with each of the four employment states for this individual are given in Table 5.

**TABLE 4**  
**Multinomial Logit Estimates Of Employment Status: Foreign-Born Of Chinese & South-Asian Origin**

|                      | NON-TRADITIONAL FOREIGN-BORN GROUPS                   |                                            |                                           |                                                       |                                            |                                           |
|----------------------|-------------------------------------------------------|--------------------------------------------|-------------------------------------------|-------------------------------------------------------|--------------------------------------------|-------------------------------------------|
|                      | CHINESE                                               |                                            |                                           | SOUTH-ASIAN                                           |                                            |                                           |
|                      | Employed<br>Part Time<br>vs.<br>Employed<br>Full Time | Unemployed<br>vs.<br>Employed<br>Full Time | Not In LF<br>vs.<br>Employed<br>Full Time | Employed<br>Part Time<br>vs.<br>Employed<br>Full Time | Unemployed<br>vs.<br>Employed<br>Full Time | Not In LF<br>vs.<br>Employed<br>Full Time |
| Constant             | -3.514<br>(-8.681)                                    | -2.592<br>(-3.830)                         | -2.562<br>(-5.878)                        | -2.319<br>(-7.020)                                    | -2.526<br>(-6.064)                         | -3.115<br>(-7.664)                        |
| Schooling            | 0.0085<br>(0.655)                                     | -0.0042<br>(-0.197)                        | -0.0341<br>(-2.499)                       | -0.0317<br>(-2.483)                                   | -0.0467<br>(-2.870)                        | -0.0638<br>(-4.447)                       |
| Age                  | 0.0216<br>(4.578)                                     | -0.0143<br>(-1.794)                        | 0.0110<br>(2.075)                         | 0.0123<br>(2.630)                                     | 0.0129<br>(2.142)                          | 0.0118<br>(2.195)                         |
| Sex                  | 1.003<br>(11.89)                                      | 0.2774<br>(2.060)                          | 0.6936<br>(7.560)                         | 1.009<br>(11.65)                                      | 0.5981<br>(5.334)                          | 0.9986<br>(9.916)                         |
| CMA resident         | -0.0580<br>(-0.237)                                   | -0.0829<br>(-0.194)                        | -0.2284<br>(-0.875)                       | -0.3058<br>(-1.971)                                   | -0.7924<br>(-4.540)                        | 0.3662<br>(1.581)                         |
| Language<br>ability  | -0.0887<br>(-0.636)                                   | 0.6168<br>(3.029)                          | 0.2594<br>(1.887)                         | 0.0738<br>(0.316)                                     | 0.7062<br>(3.015)                          | 0.5077<br>(2.293)                         |
| Immigrant<br>cohorts |                                                       |                                            |                                           |                                                       |                                            |                                           |
| 1995-1999            | 0.2742<br>(2.466)                                     | 0.4379<br>(2.445)                          | 0.6998<br>(5.766)                         | 0.2023<br>(1.730)                                     | 0.7374<br>(4.570)                          | 0.4247<br>(2.969)                         |
| 1990-1994            | 0.1926<br>(1.785)                                     | 0.0510<br>(0.270)                          | 0.2074<br>(1.629)                         | 0.0260<br>(0.218)                                     | 0.6087<br>(3.741)                          | 0.6241<br>(4.600)                         |
| 1984-1989            | 0.0764<br>(0.610)                                     | -0.3584<br>(-1.436)                        | 0.0514<br>(0.339)                         | -0.1927<br>(-1.376)                                   | 0.3399<br>(1.789)                          | -0.0218<br>(-0.126)                       |
| Likelihood<br>ratio  | 304                                                   |                                            |                                           | 396                                                   |                                            |                                           |
| N                    | 6332                                                  |                                            |                                           | 6333                                                  |                                            |                                           |

Numbers in parentheses are t ratios, and LF stands for labour force.

It is clear from Table 5 that the predicted employment status of the new foreign-born as a whole shows a clear shift towards that of the native-born as the length of residence in Canada increases. For instance, new immigrants have about a 78.3 percent chance of being employed full-time, an 8.4 percent chance of being employed part-time, a 5.7 percent chance of being unemployed and a 7.6 percent of being out of the labour force, while the corresponding numbers for the native-born are respectively 85.3 percent, 7 percent, 3.2 percent and 4.4 percent. As is evident, these native-born probabilities are also very close to what the 1984-1989 and the established (pre-1984) immigrants experience. Clearly in this regard, there is convergence in the employment profile. New immigrants start off being less likely to be employed full-time, more likely to be employed part-time, unemployed or not in the labour force, compared to the native-born, but end up with same profile as the latter in about ten to fifteen years.

Do all immigrant groups show this pattern? It is clear from Table 5 that the employment profile probabilities of the Chinese and South Asian immigrants, with the same characteristics as the average native-born, do show the convergence pattern depicted by that of all foreign-born workers. The pattern is somewhat different for the traditional immigrants. For the British, new immigrants start with a greater probability of not being in the labour force and a lower probability of being unemployed. In both these respects, older British immigrants show convergence to the native-born probabilities. In this regard, new Italians who start even further from the native-born when they first enter,

in fact appear to “over converge” in that established Italian immigrants are predicted to move beyond native-born probabilities. Some care is needed in interpreting the estimates of the two recent cohorts though since the numbers involved are relatively small and the standard deviations are large.

**TABLE 5**  
**Probabilities Of Employment Status: Native-Born & Foreign-Born Canadians**

|                                 | <b>Employed<br/>Full Time</b> | <b>Employed<br/>Part Time</b> | <b>Unemployed</b> | <b>Not In The<br/>Labour Force</b> |
|---------------------------------|-------------------------------|-------------------------------|-------------------|------------------------------------|
| <b>All Canadians</b>            | 84.7                          | 7.0                           | 3.5               | 4.7                                |
| <b>Native-born</b>              | 85.3                          | 7.0                           | 3.2               | 4.4                                |
| <b>Foreign-Born</b>             |                               |                               |                   |                                    |
| <i>Immigrant cohorts</i>        |                               |                               |                   |                                    |
| 1995-1999                       | 78.3                          | 8.4                           | 5.7               | 7.6                                |
| 1990-1994                       | 82.0                          | 7.4                           | 4.5               | 6.2                                |
| 1984-1989                       | 84.4                          | 6.8                           | 3.9               | 4.9                                |
| Pre-1984                        | 85.5                          | 6.9                           | 3.1               | 4.6                                |
| <b>BRITISH FOREIGN-BORN</b>     |                               |                               |                   |                                    |
| <i>Immigrant cohorts</i>        |                               |                               |                   |                                    |
| 1995-1999                       | 84.9                          | 7.5                           | 2.4               | 5.2                                |
| 1990-1994                       | 88.7                          | 5.9                           | 2.7               | 2.7                                |
| 1984-1989                       | 87.8                          | 6.2                           | 2.8               | 3.2                                |
| Pre-1984                        | 86.4                          | 6.5                           | 3.1               | 4.1                                |
| <b>ITALIAN FOREIGN-BORN</b>     |                               |                               |                   |                                    |
| <i>Immigrant cohorts</i>        |                               |                               |                   |                                    |
| 1995-1999                       | 72.6                          | 5.4                           | 6.7               | 15.3                               |
| 1990-1994                       | 89.1                          | 2.7                           | 2.4               | 5.8                                |
| 1984-1989                       | 88.0                          | 2.1                           | 3.1               | 6.8                                |
| Pre-1984                        | 89.5                          | 4.6                           | 2.3               | 3.6                                |
| <b>CHINESE FOREIGN-BORN</b>     |                               |                               |                   |                                    |
| <i>Immigrant cohorts</i>        |                               |                               |                   |                                    |
| 1995-1999                       | 77.5                          | 8.5                           | 4.1               | 9.9                                |
| 1990-1994                       | 82.3                          | 8.3                           | 3.0               | 6.4                                |
| 1984-1989                       | 84.7                          | 7.6                           | 2.3               | 5.6                                |
| Pre-1984                        | 84.7                          | 7.1                           | 2.9               | 5.5                                |
| <b>SOUTH-ASIAN FOREIGN-BORN</b> |                               |                               |                   |                                    |
| <i>Immigrant cohorts</i>        |                               |                               |                   |                                    |
| 1995-1999                       | 80.5                          | 8.1                           | 5.8               | 5.7                                |
| 1990-1994                       | 81.1                          | 6.8                           | 5.1               | 7.0                                |
| 1984-1989                       | 86.1                          | 5.8                           | 4.2               | 3.9                                |
| Pre-1984                        | 86.0                          | 7.1                           | 3.0               | 3.9                                |

All probabilities are calculated for an average 45-year old male with 13.5 years of schooling, knowledge of at least one official language, and living in a CMA.

## CONCLUSIONS

We empirically examined the determinants of the employment profile of foreign and native-born Canadians using as our empirical tool the multinomial logit model and data drawn from the 2001 Census of Canada. Our primary focus was on how the employment profiles of new foreign-born workers adjust over time. This we studied by estimating the impact of different immigrant cohorts on employment status. In all four immigrant groups were examined: the British and Italian (who constitute traditional immigrants) and the Chinese and South-Asians, who represent two major non-traditional immigrant groups in Canada.



Amongst other things, we found that, after controlling for individual characteristics, the employment profiles of South Asian and Chinese immigrants are generally inferior to that of the native-born in that these groups are more likely to be out of the labour force or in part-time employment. However, we find that there is a tendency towards convergence as the employment profile of immigrants who have been longer in Canada, say ten to fifteen years, more closely matches that of the native-born. The evidence on the British and Italians is more mixed, partly because they do not necessarily start at disadvantage vis-à-vis the native-born; in addition, the shifts in the employment profiles of these groups, as predicted by the logit model, do not appear to be statistically significant. Thus, for groups that matter because they tend to start with disadvantage, the assimilation to domestic labour markets in terms of employment status does appear to take place. Finally, in this paper we have used the estimated logit model to make predictions about employment profiles for one particular bundle of individual characteristics, namely those belonging to an “average” native-born male. Further analysis by considering alternative settings for these characteristics will likely yield additional insights into the issues examined in this paper.

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## NOTES

**NOTES**